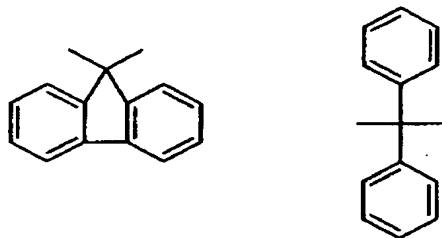


REMARKS/ARGUMENTS

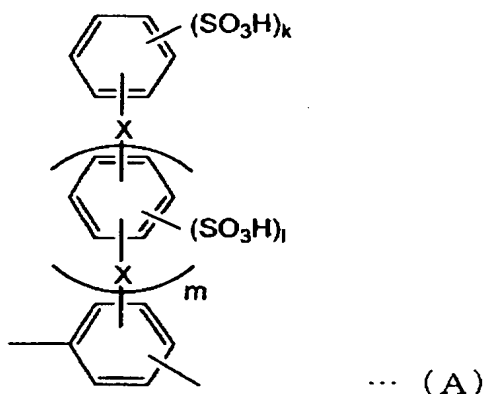
Applicants would like to thank Examiner Chuo for the indication of allowable subject matter in claims 4 and 5 of the present application. It is believed that upon entry of the present amendment, all claims remaining in the application will be in condition for allowance.

Claims 1 and 3-5 are active in this application. Claims 1 and 3 have been amended to specify that Q represents a divalent electron donating group selected from the group consisting of -O-, -S-, -CH=CH-, and -C≡C-; and J represents at least one group selected from the following formulae

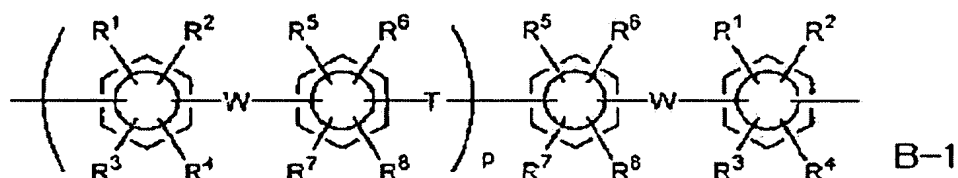


These amendments are supported by the specification at page 10, first and third paragraphs. The specification has been amended to correct an obvious error noted by the Examiner at page 16. No new matter has been added by these amendments.

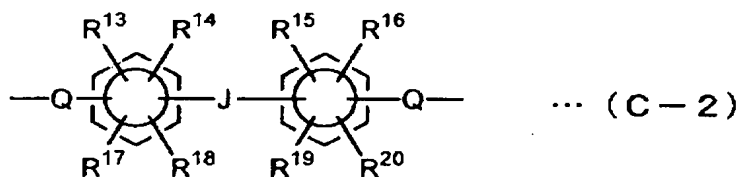
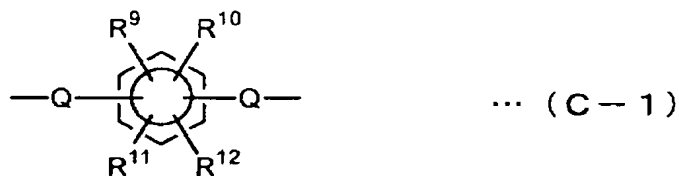
The present invention relates to a membrane-electrode assembly for a direct methanol type fuel cell. The assembly is required to comprise a negative electrode and a positive electrode assembled via a proton conductive membrane. The negative electrode is provided with a negative electrode-side separator having a mechanism for feeding a methanol aqueous solution as fuel. The positive electrode is provided with a positive electrode-side separator having a mechanism for feeding an oxidizing agent gas. Importantly, the proton conductive membrane comprises a polymer containing 0.05-99.95 mol% of a repeating constitutional unit represented by the following general formula (A):



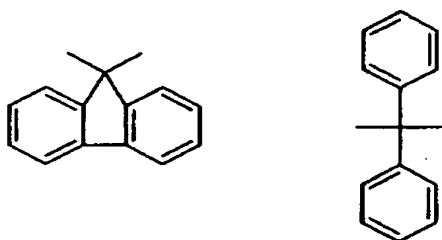
wherein X represents a single bond (—) or an electron withdrawing group or electron donating group; m represents an integer of 0-10; when m is 1-10, Xs may be the same or different; k represents an integer of 0-5; l represents an integer of 0-4; and $(k + l) \geq 1$, and 0.05-99.95 mol% of a repeating constitutional unit represented by the following general formula (B-1) or (B-2):



wherein R^1 to R^8 may be the same or different and each represents at least one atom or group selected from the group consisting of a hydrogen atom, a fluorine atom, an alkyl group, a fluorine-substituted alkyl group, an allyl group, an aryl group, and a cyano group; W represents a divalent electron withdrawing group; T represents at least one group selected from divalent groups represented by the following general formula (C-1) or (C-2):

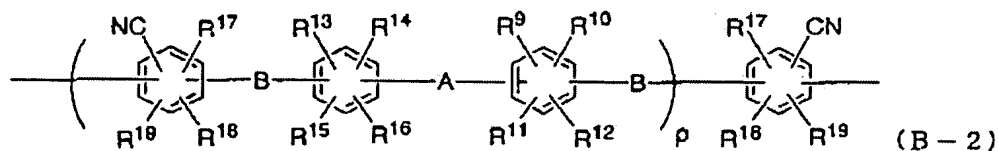


wherein R^9 to R^{20} may be the same or different and each represents at least one atom or group selected from the group consisting of a hydrogen atom, a fluorine atom, an alkyl group, a fluorine-substituted alkyl group, an allyl group, an aryl group, and a cyano group; Q represents a divalent electron donating group selected from the group consisting of -O-, -S-, -CH=CH-, and -C \equiv C-; and J represents at least one group selected from the following formulae



; and

p represents an integer of 1 to 80;

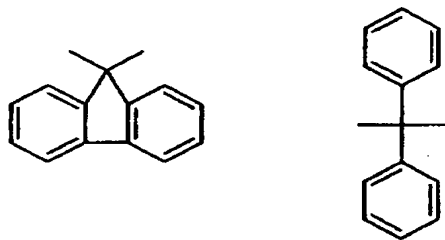


wherein R^9 to R^{19} may be the same or different and each represents at least one atom or group selected from the group consisting of a hydrogen atom, a fluorine atom, an alkyl group, a fluorine-substituted alkyl group, an allyl group, an aryl group, and a cyano group; A

represents a single bond or a divalent electron withdrawing group; B represents a divalent donating group; and p represents an integer of 1 to 80.

Thus, the present invention proton conductive membrane must comprise a polymer of (A) and either of (B-1) or (B-2) units.

Claims 1 and 3 stand rejected under 35 U.S.C. 102(a) or (e) over Asano. Asano makes no disclosure of conductive membranes wherein there is present corresponding to (B-1) or (B-2) of the present invention as now claimed. In particular, (B-1) of the present invention now requires that T be either C-1 or C-2, where Q is an electron donating group selected from -O-, -S-, -CH=CH-, and -C \equiv C-; and J represents at least one group selected from the following formulae



. Nowhere in Asano is there disclosure or suggestion of compounds having the required Q or J groups with the requisite number of aryl groups in the required configuration. Even when a=2 in formula (2) of Asano, the resulting compound meets neither of (B-1) or (B-2) of the present invention, as there are no groups corresponding to J of (B-1) of the present invention, and the resulting compound of Asano would have alternating electron withdrawing and -O- groups, with an even number of aryl groups in formula (2), while the present invention would have the group Q (which is an electron donating group) on both valences of the group (C-1). The resulting configuration of (B-1) cannot match any configuration of formula (2) of Asano, as formula (2) of Asano cannot have two -O- groups connected to the same aryl.

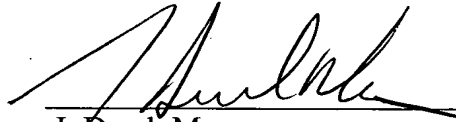
Further, (B-2) requires the presence of CN groups, which are nowhere disclosed by Asano. As such, Asano cannot anticipate the present invention. Further, since there is nothing within Asano to suggest modification of their compounds to those of the present invention, Asano cannot render the present invention as now claimed obvious. As such, the rejection should be withdrawn.

The Examiner's objection to the specification has been obviated by the present amendment. Applicants would like to thank Examiner Chuo for bringing the typographical error at page 16 to Applicants' attention.

Applicants submit that the application is now in condition for allowance and early notification of such action is earnestly solicited.

Respectfully submitted,

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